

Amendments to the Claims

These claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) Antenna diversity, comprising:

[[-]] a first antenna element and a second antenna element, the first antenna element arranged for operating in an active mode and comprising a connection for connecting the first antenna element to a transceiver of said electronic device for transceiving electromagnetic signals and the second antenna arranged for operation in a parasitic mode by interfering the impedance of the first antenna element due to electromagnetic coupling_{as}; wherein the second antenna element in the parasitic mode is terminated by an adjustable impedance; characterized by

[[-]] a pre-selection unit for adjusting the adjustable impedance ensuring that the amount of a mismatch between the impedance of the antenna element in the active mode and the impedance of the transceiver is below a predetermined threshold value,

[[-]] a selection unit for adjusting the adjustable impedance within a range determined by the pre-selection unit fulfilling a predetermined received signal quality criterion for the transceived electromagnetic signal best.

2. (currently amended) Method for operating an antenna diversity, the diversity including a first and a second antenna element, the first antenna element being operated in an active mode by being connected to a transceiver for transceiving electromagnetic signals and the second antenna element being operated in a parasitic mode by interfering the impedance of the first antenna

element due to electromagnetic coupling to the first antenna element; the method being characterized by the steps of comprising:

[[-]] adjusting the adjustable impedance ensuring that the amount of a mismatch between the impedance of the antenna element in the active mode and the impedance of the transceiver is below a predetermined threshold value;

[[-]] selecting the adjustable impedance within a range determined by the pre-selection unit fulfilling a predetermined received signal quality criterion for the transceived electromagnetic signal best.

3. (currently amended) Method according to claim 2, characterized in that the method steps wherein said adjusting and selecting are repeated by selecting one of ~~are repeated~~ occasionally, ~~or~~ after a predetermined time interval, ~~or~~ after a change in the mismatch, ~~and or~~ after a change of received signal quality.

4. (currently amended) Method according to claim 2, characterized in that wherein the step of adjusting the adjustable impedance comprises the substeps of:

[[-]] sequentially varying the adjustable impedance of the second antenna element to n1 different amounts and detecting the co-ordinated amounts of mismatch between the impedance of the first antenna element and the impedance of the transceiver as well as the co-ordinated degree of performance of the signal quality criterion for the electromagnetic signal transceived by the first antenna element.

5. (currently amended) Integrated circuit comprising:

a transceiver (160) and;

a first input for connecting a first antenna element to transceiver (160) for transceiving electromagnetic signals and;

a second input for connecting a second antenna arranged for operation in a parasitic mode by interfering the impedance of the first antenna element due to electromagnetic coupling;

an adjustable impedance (170b) connected to the second input for terminating the second antenna element (110b); characterized in that the integrated circuit further comprises:

[[-]] a pre-selection unit (130) connected to the first input and comprising an output for adjusting the adjustable impedance (170b) where the pre-selection unit (13) is operative to ensure that the amount of a mismatch between the impedance of the antenna element in the active mode and the impedance of the transceiver (160) is below a predetermined threshold value,

[[-]] a selection unit (140) connected to the preselection unit (130) and to an output of the transceiver (160) providing received signal quality information, where the selection unit (14) is operative to adjust the adjustable impedance (170b) within a range determined by the pre-selection unit (130) fulfilling a predetermined received signal quality criterion for the transceived electromagnetic signal best.